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PLUCHEA FOETIDA (ASTERACEAE) CONFIRMED IN THE OKLAHOMA FLORA

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ABSTRACT

Pluchea foetida is confirmed as a member of the native flora of Oklahoma. It is documented by three collections from the West Gulf Coastal Plain of Pushmataha County, apparently at the northwestern edge of the distribution of the species. Collections were made during the summer of 2008 and 2014.

Pluchea foetida (L.) DC. var. *foetida* (Asteraceae, Plucheeae), commonly called stinking camphorweed, is distributed in permanently wet soil of the southeast coastal plain of the USA (New Jersey to south Florida, west to south Arkansas, and east Texas (Cronquist 1980). Nesom (2006) included Hispaniola and Mexico (as have Small 1933 and Fernald 1950) and southeast Oklahoma as part of the distribution in his treatment of *Pluchea* for the Flora of North America. The purpose of this paper is to elucidate the distribution of the species in Oklahoma.

Despite being mentioned by Nesom (2006) as occurring in Oklahoma, *Pluchea foetida* is not included in the Keys to the Flora of Oklahoma (Waterfall 1966), the checklist of the flora of the state (Taylor and Taylor 1994), or Keys and Descriptions for the Vascular Plants of Oklahoma (Tyrl et al. 2010), nor is it mapped as part of the Oklahoma flora in USDA, NRCS (2014) or Kartesz (2014). Inquiries to the herbaria most likely expected to possess a specimen (BRIT-SMU, CSU, DUR, UCO, OKL, OSU, TAMU, TEX-LL, and TULS) were successful in locating one specimen at OKL (Hoagland et al. 2004).

Based upon specimens cited below, which were recently collected, *Pluchea foetida* is now documented as part of the flora of Oklahoma.

Voucher specimens. **USA. Oklahoma.** Pushmataha County: Junction of Indian Nation Turnpike and Hwy 3, ca. 0.3 mi N of junction of Indian Nation Turnpike/Hwy 3, E side, 28 Aug 2008, *Buthod* and *Hoagland* 7843 (OKL); 0.4 mi N of the jct of OK Hwy 3 and Indian Nation Turnpike on Indian Nation Turnpike in hillside bog in right of way on the E side of Indian Nation Turnpike (34° 14'25.78" N, 95° 39'8.95" W), 8 Jul 2014, *J., L., A., and R. Singhurst 20,825* (BAYLU, OKL); Jct. of OK Hwy 3 and Indian Nation Turnpike, in hillside bog in right of way on NE corner inside cloverleaf adjacent to turnpike pay facility (34° 14'14.72" N, 95° 39'1.26" W), 9 Aug 2014, *J., L., A., and R. Singhurst 20,826* (BAYLU, OKL). Figures 1 and 2.

Figure 1. Photo of capitula of *Pluchea foetida* in Pushmataha Co., Oklahoma. Photo by Jason Singhurst.

Figure 2. Habitat photo of *Pluchea foetida* in hillside bog in Pushmataha Co., Oklahoma. Photo by Jason Singhurst.

The nearest documented occurrences to the reported Oklahoma *Pluchea foetida* records include the following: (1) Miller Co., Arkansas, *Reid 1511*, UARK, which is approximately 215 km at 123° from the Oklahoma locations, and (2) Smithland in Marion Co., Texas, *Singhurst & Adams 18934*, BAYLU, which is about 250 km at 145° from the Oklahoma stations. The cited Oklahoma occurrences apparently represent the northwestern limits of the distribution of the species.

In Pushmataha County, *Pluchea foetida* appears restricted to Oklahoma Acidic Hillside Seeps (Nature Serve 2014) surrounded by the Antlers Sand Formation. These hillside seeps are highly localized and isolated wetlands in southeast Oklahoma that include a number of disjunct West Gulf Coastal Plain flora at their northwest range limits. Dominant species of Oklahoma Acidic Hillside Seeps include *Andropogon virginicus*, *Dichanthelium scoparium*, *Boehmeria cylindrica*, *Sphagnum* spp., and *Polytrichum commune*. Other characteristic flora of the two hillside seeps include *Baccharis halimifolia*, *Drosera brevifolia*, *Carex* spp., *Cyperus strigosus*, *Eleocharis tortilis*, *Eriocaulon decangulare*, *Eupatorium perfoliatum*, *E. rotundifolia*, *Gratiola pilosa*, *Hydrolea ovata*, *Juncus validus*, *Helianthus angustifolius*, *Lycopodiella appressa*, *Ludwigia hirtella*, *Mitreola petiolata*, *Osmunda cinnamomea*, *O. regalis*, *Oxypolis rigidior*, *Rhexia mariana*, *R. virginica*, *Rhynchospora caduca*, *R. gracilenta*, *R. rariflora*, *Rubus argutus*, *Scleria sp.*, *Utricularia juncea*, *U. rariflora*, *U. subulata*, *Xyris difformis*, and *X. jupicai*.

Pluchea foetida will be ranked S1 by the Oklahoma Natural Heritage Inventory, indicating that it is "critically imperiled in the state because of extreme rarity or because of some factor(s) such as very steep declines in populations making it especially vulnerable to extirpation from the jurisdiction" (Oklahoma Natural Heritage Inventory 2014; NatureServe Explorer 2014).

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